

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. Canceled.
2. (Currently amended) ~~The A solid-state imaging apparatus according to claim 1, wherein~~
comprising:

a plurality of photosensitive cells disposed in a matrix in a photosensitive region on a semiconductor substrate; and

a driving unit for driving the plurality of photosensitive cells,

wherein each of the photosensitive cells includes:

a photodiode formed to be exposed on a surface of the semiconductor substrate, for accumulating signal charge obtained by subjecting incident light to photoelectric exchange;

a transfer transistor formed on the semiconductor substrate, for transferring the signal charge accumulated in the photodiode;

a floating diffusion layer formed on the semiconductor substrate, for temporarily accumulating the signal charge transferred by the transfer transistor; and

an amplifier transistor formed on the semiconductor substrate, for amplifying the signal charge temporarily accumulated in the floating diffusion layer,

wherein a source/drain diffusion layer provided in the amplifier transistor is covered with a salicide layer,

the floating diffusion layer is formed to be exposed on the surface of the semiconductor substrate, and

an impurity concentration of the floating diffusion layer is lower than an impurity concentration of the source/drain diffusion layer of the amplifier transistor.

3. (Currently amended) ~~The A solid-state imaging apparatus according to claim 1, wherein~~
comprising:

a plurality of photosensitive cells disposed in a matrix in a photosensitive region on a semiconductor substrate; and

a driving unit for driving the plurality of photosensitive cells,

wherein each of the photosensitive cells includes:

a photodiode formed to be exposed on a surface of the semiconductor substrate, for accumulating signal charge obtained by subjecting incident light to photoelectric exchange;

a transfer transistor formed on the semiconductor substrate, for transferring the signal charge accumulated in the photodiode;

a floating diffusion layer formed on the semiconductor substrate, for temporarily accumulating the signal charge transferred by the transfer transistor; and

an amplifier transistor formed on the semiconductor substrate, for amplifying the signal charge temporarily accumulated in the floating diffusion layer,

wherein a source/drain diffusion layer provided in the amplifier transistor is covered with a salicide layer,

the floating diffusion layer is formed to be exposed on the surface of the semiconductor substrate,

each of the photosensitive cells further includes a reset transistor for resetting the floating diffusion layer,

the driving unit includes:

a vertical driver circuit for simultaneously driving the transfer transistor and the reset transistor in a vertical direction;

a noise suppressing circuit for obtaining a signal output to a plurality of vertical signal lines disposed in a vertical direction in the photosensitive region; and

a horizontal driver circuit for outputting a signal from the noise suppressing circuit in a time series by successively switching a plurality of horizontal transistors disposed in a horizontal direction, and

an impurity concentration of the floating diffusion layer is lower than an impurity concentration of a source/drain diffusion layer provided in a plurality of transistors constituting the vertical driver circuit and the horizontal driver circuit.

4. (Original) The solid-state imaging apparatus according to claim 3, wherein the source/drain diffusion layer provided in the plurality of transistors constituting the vertical driver circuit and the horizontal driver circuit is covered with a salicide layer.

5. (Currently amended) The solid-state imaging apparatus according to claim ~~[[1]]~~ 2, wherein the transfer transistor and the amplifier transistor are composed of an n-type MOS transistor.

6. (Original) The solid-state imaging apparatus according to claim 3, wherein the vertical driver circuit and the horizontal driver circuit are composed of a dynamic logic circuit..

7. (Original) The solid-state imaging apparatus according to claim 3, wherein an impurity concentration of a source/drain diffusion layer of a part of the plurality of transistors constituting the vertical driver circuit and the horizontal driver circuit is lower than an impurity concentration of a source/drain diffusion layer of another part of the plurality of transistors constituting the vertical driver circuit and the horizontal driver circuit.

8. (Original) The solid-state imaging apparatus according to claim 3, wherein a source/drain diffusion layer of a part of the plurality of transistors constituting the vertical driver circuit and the horizontal driver circuit is formed to be exposed on a surface of the semiconductor substrate, and a source/drain diffusion layer of another part of the plurality of transistors constituting the vertical driver circuit and the horizontal driver circuit is covered with a salicide layer.

9. (Currently amended) The solid-state imaging apparatus according to claim [[1]] 2, wherein an impurity concentration of the floating diffusion layer is $1 \times 10^{18} \text{ cm}^{-3}$ or less.
10. (Withdrawn) A method for producing a solid-state imaging apparatus comprising:
- a plurality of photosensitive cells disposed in a matrix in a photosensitive region on a semiconductor substrate; and
 - a driving unit for driving the plurality of photosensitive cells,
- wherein each of the photosensitive cells includes:
- a photodiode formed to be exposed on a surface of the semiconductor substrate, for accumulating signal charge obtained by subjecting incident light to photoelectric exchange;
 - a transfer transistor formed on the semiconductor substrate, for transferring the signal charge accumulated in the photodiode;
 - a floating diffusion layer formed on the semiconductor substrate, for temporarily accumulating the signal charge transferred by the transfer transistor; and
 - an amplifier transistor formed on the semiconductor substrate, for amplifying the signal charge temporarily accumulated in the floating diffusion layer,
- wherein a source/drain diffusion layer provided in the amplifier transistor is covered with a salicide layer, and the floating diffusion layer is formed to be exposed on the surface of the semiconductor substrate,
- the method comprising:
- forming the photodiode, the transfer transistor, and the amplifier transistor on the semiconductor substrate;
 - forming a resist in a predetermined pattern so as to cover the photodiode, the transfer transistor, and the amplifier transistor;
 - implanting ions into the semiconductor substrate using the resist as a mask so as to form the floating diffusion layer;

removing the resist and forming a salicide blocking film so as to cover the floating diffusion layer and the photodiode;

forming a source/drain diffusion layer of the amplifier transistor; and

forming a salicide layer so as to cover the source/drain diffusion layer of the amplifier transistor.

11. (Withdrawn) The method for producing the solid-state imaging apparatus according to claim 10, wherein an impurity concentration of the floating diffusion layer is lower than an impurity concentration of the source/drain diffusion layer of the amplifier transistor.

12. (Withdrawn) A method for producing a solid-state imaging apparatus comprising:

a plurality of photosensitive cells disposed in a matrix in a photosensitive region on a semiconductor substrate; and

a driving unit for driving the plurality of photosensitive cells,

wherein each of the photosensitive cells includes:

a photodiode formed to be exposed on a surface of the semiconductor substrate, for accumulating signal charge obtained by subjecting incident light to photoelectric exchange;

a transfer transistor formed on the semiconductor substrate, for transferring the signal charge accumulated in the photodiode;

a floating diffusion layer formed on the semiconductor substrate, for temporarily accumulating the signal charge transferred by the transfer transistor; and

an amplifier transistor formed on the semiconductor substrate, for amplifying the signal charge temporarily accumulated in the floating diffusion layer,

wherein a source/drain diffusion layer provided in the amplifier transistor is covered with a salicide layer, and the floating diffusion layer is formed to be exposed on the surface of the semiconductor substrate,

the method comprising:

forming a resist in a predetermined pattern on the semiconductor substrate;

implanting ions using the resist as a mask so as to form the photodiode;

removing the resist and forming the transfer transistor and the amplifier transistor on the semiconductor substrate;

forming a first salicide blocking film so as to cover the photodiode;

implanting ions into the semiconductor substrate so as to form the floating diffusion layer and the source/drain diffusion layer of the amplifier transistor;

forming a second salicide blocking film so as to cover the floating diffusion layer; and

forming a salicide layer so as to cover the source/drain diffusion layer of the amplifier transistor.

13. (Withdrawn) The method for producing the solid-state imaging apparatus according to claim 12, wherein an impurity concentration of the floating diffusion layer is lower than an impurity concentration of the source/drain diffusion layer of the amplifier transistor.